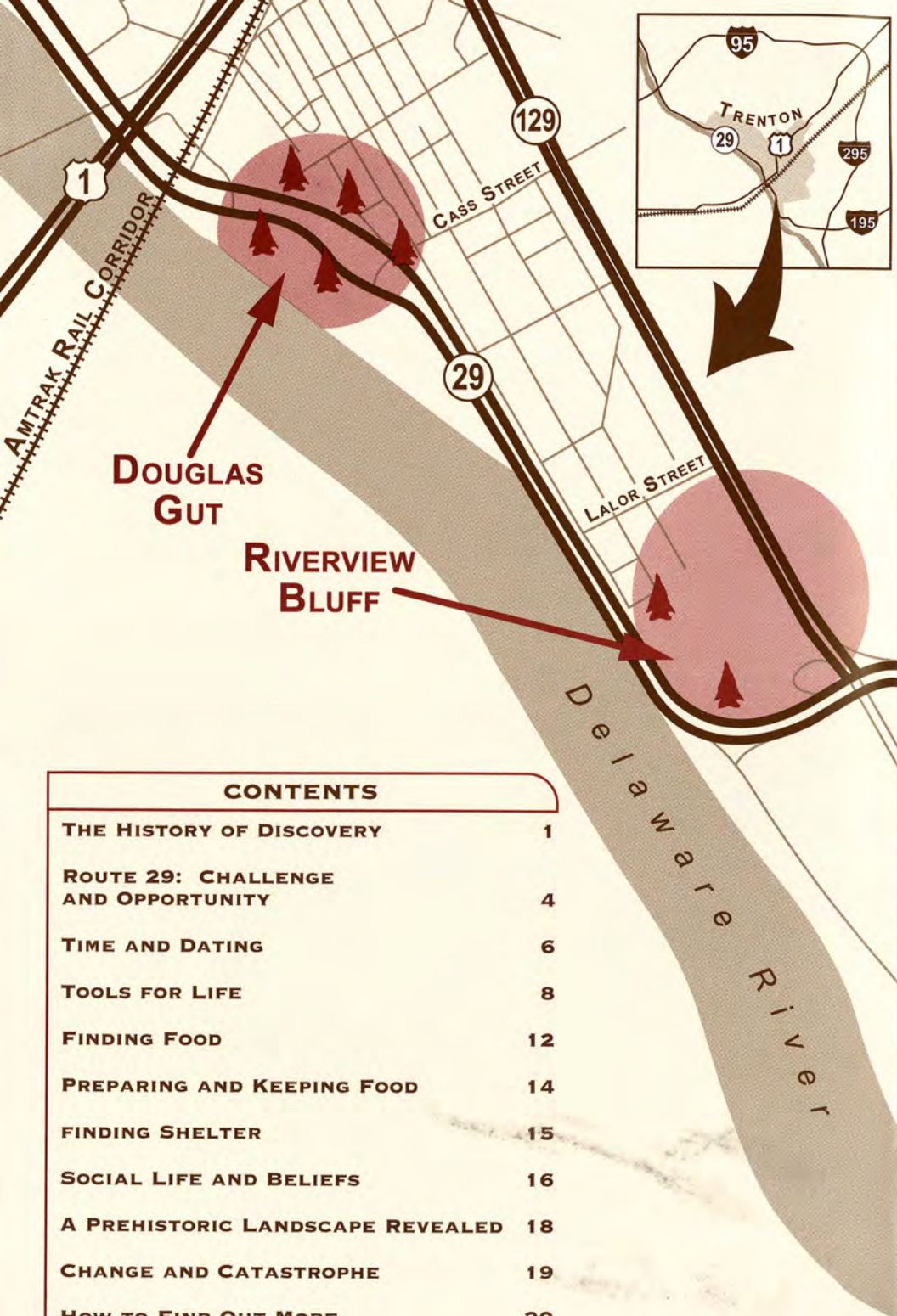


History traced by **Route 29**

*Ancient Ways*

**NATIVE AMERICANS IN SOUTH TRENTON,  
10,000 B.C. TO A.D. 1700**





Prehistoric artifacts—chiefly stone tools and fragments of pottery—have been found at dozens of locations in and around Trenton. They are the keys to understanding the original settlement of the Trenton area and the lives of the people who made and used them.

For many years, archaeologists have recognized that this stretch of the Delaware River was used by Native Americans long before the arrival of European settlers in the 17th century. Local landowner Charles Conrad Abbott pioneered this work in the 1860s and 1870s, encouraging nationally known scholars to do extensive excavations in subsequent decades. The Abbott Farm and surrounding area soon became the focus of a national debate about human antiquity in North America, with Abbott claiming that artifacts he was finding locally were tens of thousands of years old and comparable in age and culture to materials assigned to the Paleolithic or Old Stone Age in Europe.



Charles Conrad Abbott (1843-1919), naturalist and archaeologist, for whom the Abbott Farm is named. [Courtesy of Archaeological Society of New Jersey]

In the 1890s and early years of the 20th century, studies by Harvard University's Peabody Museum of Archaeology and Ethnology effectively disproved Abbott's claims and demonstrated that Native American occupation in the Trenton area was of a lesser vintage. During the 1930s further discoveries were made at the Abbott Farm by Dr. Dorothy Cross of the New Jersey State Museum, who orchestrated several excavation campaigns with the help of funding from the Work Projects Administration (known as the Works Progress Administration after 1938). From the 1970s onward, archaeological studies carried out in advance of recent highway construction found many more sites. Over the years, the Abbott Farm area has produced widespread evidence of Native American occupation, mostly dating from the past three to four thousand years.

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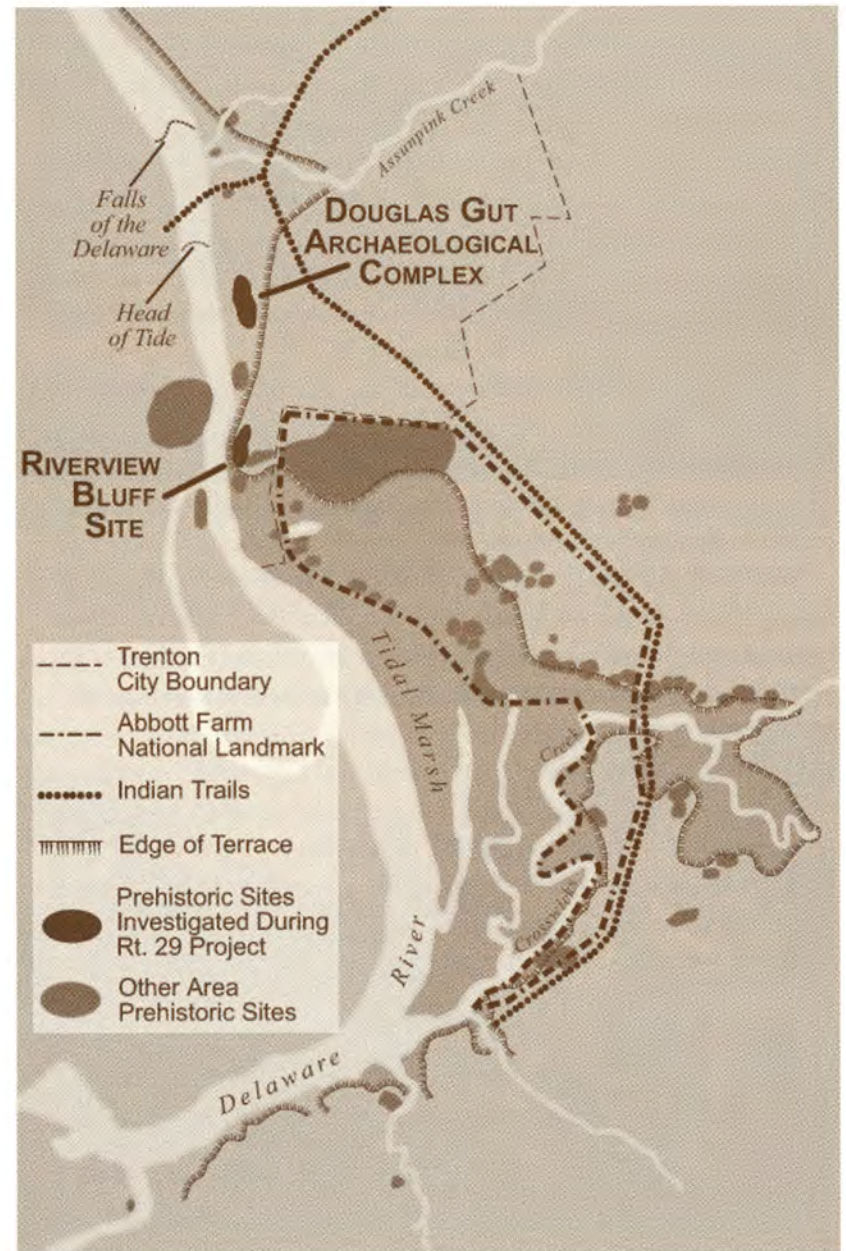
Dr. Dorothy Cross and a colleague excavate a large prehistoric pot at the Abbott Farm in 1936. [Courtesy of the New Jersey State Museum]

Geography provides many of the reasons for the concentration of sites. Trenton is the farthest point to which tides flow up the Delaware. It is a place where rocky rapids (called “the Falls” by early English settlers) make it difficult for boats and migrating fish to get farther up the river, and also provides the first place where the river can be easily crossed on foot by means of a winding route through the shallows, which was still used in the late 1700s. Just south of the Falls, at the mouth of Crosswicks Creek, lies an extensive area of low-lying ground, the Trenton Hamilton Marsh. Native Americans lived on the dry flat ground at the top of the bluffs around the marsh and exploited the rich and varied plant and animal food resources there.

How can these ancient artifacts and sites still be found in an urban area like Trenton? While the original ground surface has been changed by modern development in many places, in others it has been covered and protected. It is from these places that the prehistoric past gives up its secrets to archaeological research.

#### THE ABBOTT FARM HISTORIC DISTRICT

The numerous prehistoric archaeological sites ranged around the mouth of Crosswicks Creek and along the bluffs overlooking the Delaware River south of Trenton are collectively referred to as the Abbott Farm Historic District. The district was designated a National Historic Landmark in 1976 in recognition of the role played by these archaeological resources in our understanding of human antiquity in North America.



This map shows prehistoric archaeological sites clustered around the tidal marsh just south of Trenton and upriver toward the rapids or “Falls of the Delaware.” [Hunter Research, Inc.]

## ROUTE 29: CHALLENGE AND OPPORTUNITY

This booklet concentrates on discoveries made in the late 1990s during the reconstruction of a section of New Jersey Route 29 running alongside the Delaware River in South Trenton and Lambertton. Public projects like this are required by law to reduce impacts to the environment, and this includes finding and studying archaeological sites that might be affected. The challenge was to find the sites and to ensure that they were correctly treated (chiefly through detailed excavation) before construction began. The opportunity was to build on all the previous work and to learn more about the people who lived here before the Trenton area was settled by Europeans.

How do archaeologists know where sites are? Information is gathered from historic maps and photographs, from test borings, from geological studies, and from examination of the modern urban landscape. Then it is possible to make an informed guess as to where sites may still lie in undisturbed ground.

Once probable site locations are found, more detailed archaeological testing begins. In the work along this section of Route 29, these tests revealed well-preserved prehistoric sites in two areas. The first of these areas was named Riverview Bluff, and was made up of two separate



Archaeologists study soils and prehistoric artifacts on the slope of the Riverview Bluff site in 1998. The main prehistoric occupation was at the top of the slope. [Hunter Research, Inc.]



Excavations in August 1998 at the Chain Shop site (so-called because it was overlaid by a 19th-century chain-making building) within the Douglas Gut Archaeological Complex. This was the location of a small Native American hamlet about 800 years ago. [Hunter Research, Inc.]

pieces (North and South) adjacent to the famous Riverview Cemetery (see the companion booklet *Quakers, Warriors, and Capitalists*). This site produced the highest density of prehistoric artifacts along the highway corridor. The second was termed the Douglas Gut Archaeological Complex, and lay in the area between U.S. Route 1 and Mercer County Waterfront Park. Here, the evidence told of a small hamlet or village occupied about 800 years ago. Together, these sites enhanced understanding of Native American life on the Delaware, ancient ways that remained largely unaltered over many centuries.

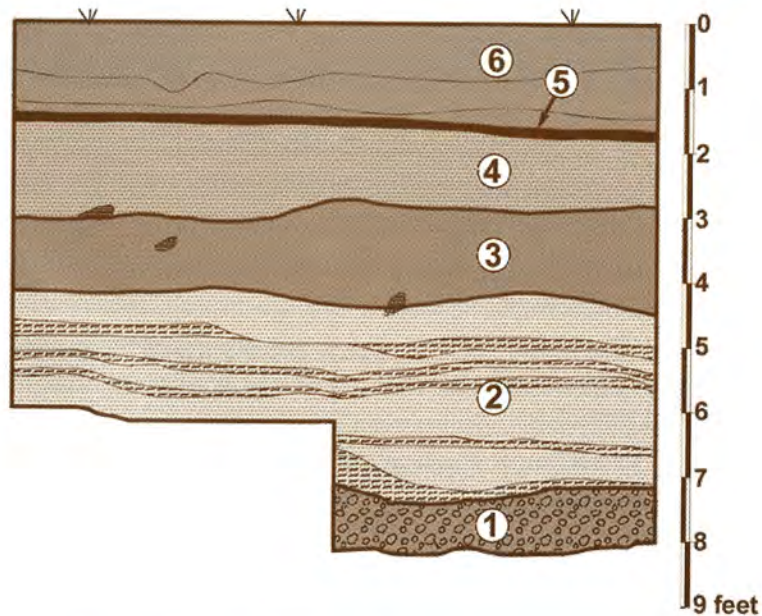
### PUBLIC ARCHAEOLOGY AND ROUTE 29

The rebuilding of Route 29 in South Trenton, a federally funded public works project, was subject to the National Historic Preservation Act of 1966, which required that archaeological studies be undertaken as part of the highway planning and construction process. Archaeological surveys were carried out in the mid-1970s, early 1980s and mid-1990s. The major excavations that form the basis for this booklet were conducted in 1998–99 and supplemented with archaeological monitoring during construction in 2000–02.

## TIME AND DATING

The ancestors of modern Native Americans first reached eastern North America about 12,000 years ago, toward the end of the Ice Age. The most ancient distinctive artifacts found on the Route 29 project are spearpoints about 7,000 to 10,000 years old.

Since these people had no writing, we can study them only from the things they have left behind. This is the meaning of the term “prehistoric,” that is, before written history. It does not mean that people in prehistoric times were less intelligent or more primitive than present-day humans. They were resourceful and skilled, attuned to their environment.



A simplified soil profile through 9 feet of deposits at the Douglas Gut Archaeological Complex. The lowest level (1) is made up of cobbles and gravel laid down during the rapid melting of the ice sheets at the end of the last glaciation more than 10,000 years ago. Above this lie more than 3 feet of soils (2) laid down as silts by the Delaware River over many thousands of years. A few artifacts were found in these levels. These deposits were originally much deeper, but the upper layers were washed away in violent floods. Above this lies about 18 inches of material (3) that accumulated here about 6,000 years ago when there was a lot of soil erosion from the nearby uplands. Lying on top of these soils are river sediments dating from the last 3,000 years (4). These contained many prehistoric artifacts. A thin dark line (5) marks the old land surface that existed here around 200 to 400 years ago. Above this surface are urban fill deposits placed here over the last 150 years or so (6). [Hunter Research, Inc.]

Archaeologists use several techniques to work out how old things are and to determine when things happened in the past. **Stratigraphy** relies on two simple facts: that soil levels tend to build up over time, and that lower levels are older than higher ones. By noting in which soil layers artifacts are found, we can see which types are older than others. On Route 29 cuts through the soils by the river showed the history of this piece of landscape from the end of the Ice Age until modern times.



Stone projectile points from the Douglas Gut Archaeological Complex. The study of differences in design (typology), together with the controlled recovery of these artifacts in the field (stratigraphy), enables their date of manufacture to be estimated. The specimen at the top left may be as much as 9,000 years old, while the ones in the bottom row were made less than 1,000 years ago. The bottom right projectile point is approximately 1 inch long. [Hunter Research, Inc.]

A second technique, **typology**, studies the form or shape of artifacts to see changes in design, style, or technique through time. Projectile points (arrowheads and spearpoints) illustrate this very well, since there are many different types known.

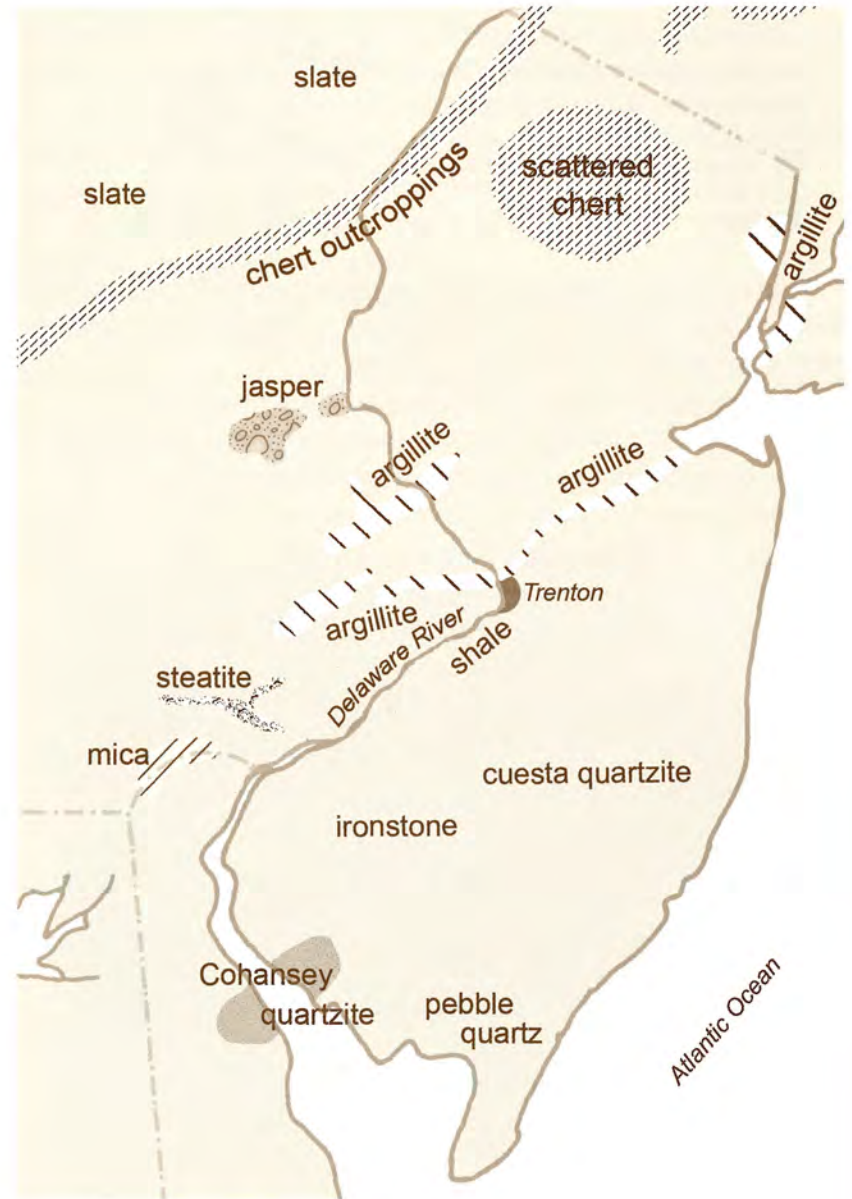
**Radiocarbon dating**, which measures the amount of radioactivity in charcoal, bone, or other once-living material, can calculate how old the item is, often to within a hundred years or even less. About 40 of these dates were obtained during the Route 29 studies.

More than 100,000 prehistoric artifacts—things made or altered by people—were found on the Route 29 project. Most of these were of stone, because stone does not decay in the ground like many other materials. Ceramics (pottery) is another important type of artifact. It is important to realize, though, that prehistoric people made use of many other types of material: bone, hide, horn, quill, fur, and sinew from animals, and wood, bark, leaves, and grasses and many other parts of plants. Most of these materials do not survive long in the Trenton area soils, and so many types of artifacts are lost to us.

**STONE TOOLS** Different kinds of tools required different types of stone for their manufacture. Tools that had to be sharp, like projectile points, scrapers, and knives were often made from very hard fine materials such as jasper and chert. Another important stone, very popular at some periods, is a bluish gray stone called argillite. For the people living along the Delaware River near the falls there were at least three ways they could get the stone they needed. They could search along the riverbank for cobbles washed down from farther upstream; they could go up to the outcrops themselves, perhaps 35 to 40 miles away; or they could obtain the stone by trading. It is probable that they used all three of these methods.



A cache of partly finished stone tools of argillite, about 3,000 years old, recovered from the Douglas Gut Archaeological Complex. The longest tool is about 4.5 inches long. [Hunter Research, Inc.]



A map of New Jersey and surrounding area showing sources of the main stone types used for making tools. Some workable stone was probably also found along the Delaware River close to many Native American occupation sites.

[Herbert C. Kraft, *The Lenape-Delaware Indian Heritage 10,000 BC to AD 2000*, 2001]

*How to use an atlatl. This tool enabled spears to be propelled farther and more forcefully by enhancing the power of the hunter's throwing arm. The counterweight stone at the back often survives archaeologically.*  
[Drawing courtesy of Lenape Lifeways, Inc.]



Other tools would be made of other kinds of stone. Special artifacts, such as the beautiful counterweights placed on spearthrowers or atlatls were often made of unusual types of stone.

Two exciting discoveries at the Douglas Gut Archaeological Complex show something of the tool-making process. The first is a collection of partly finished tools made of argillite whose shape shows that they belong to a particular cultural tradition, called Lackawaxen, from around 3,000 years ago. They were probably placed in the ground in a bag where they could be found again another season. This tells us that places were being re-used repeatedly, probably on a seasonal cycle.



*A cache of jasper flakes and tools, about 1,200 years old, recovered from the Douglas Gut Archaeological Complex. The longest piece is about 2.5 inches long.* [Hunter Research, Inc.]

The second discovery is a collection of artifacts of hard honey-colored jasper, probably from Bucks County, Pennsylvania, made about 1,200 years ago. This collection of partly finished and broken tools and waste flakes had been re-used many times as a handy source from which tools could be made on-site.

**POTS AND CONTAINERS** Pottery is made from clay, and by examining the clay it is often possible to work out where it came from. Much of the pottery found along the Route 29 corridor was made nearby. This is very useful information, because the making of pottery is a slow process that requires the potter to be in one place for several weeks at a time, something that would not be possible if the community was constantly on the move hunting and gathering food. The pottery tells us that the community was remaining in one place for a prolonged period, probably in the summer.

Pottery is also important in telling us about the cultural and social lives of people. Because it can be made in many different shapes and decorated in many different ways, vessels often reflect the traditions of the group to which the potter belonged. In general, the pots from these sites show that the people here had strong connections to communities of the Lower Delaware Valley, and less with groups upriver.



*Examples of different decorative styles and techniques on pieces of Native American pottery recovered along the Route 29 corridor. Ceramic designs change through time and help archaeologists understand the dates of the pots and the cultural affinities of the people who made them. The top left sherd is approximately three inches wide.* [Hunter Research, Inc.]

Obtaining, preparing, and preserving food took up a great deal of time and hard work, but many of these activities were also opportunities for socializing. We know that Native Americans used a wide variety of plants for food. Many of these plants grew wild and were gathered in season. From about 800 years ago people in the Trenton area also began growing crops, particularly corn, in small fields or garden plots.



Crop cultivation began about 1,000 years ago in the Delaware Valley. In this reconstructed view women are hoeing and planting seeds of corn in small mounds. [Drawing courtesy of Lenape Lifeways, Inc.]

Examination of soil samples from the Douglas Gut Archaeological Complex identified several kinds of foods. Hickory nuts, butternuts, and acorns were quite common. The starchy seeds from three plants unfamiliar to most of us today—smartweed, goosefoot, and poke-weed—were all used for food and probably for medicinal purposes as well. They were ground into flour using stone mortars and pestles. Evidence of corn was found in residues on pieces of pottery and from small plant remains called phytoliths. Other phytoliths (fossilized microscopic plant remains) from tall, moisture-loving grasses suggest that the area immediately around the site was quite wet much of the time, reflecting the presence of the marshy land, known historically as Douglas Gut, lying just to the east.

Many animals were used for food. We know from accounts of Quaker settlers in the late 1600s that the Native Americans at that time were very skilled deer hunters. Direct archaeological evidence of this is hard to come by because bones do not survive well in the Trenton area soils. The arrowheads and spear-points found on every site were probably chiefly used for hunting.

Not surprisingly, there is also evidence of fishing, found principally at the Riverview Bluff site. This takes the form of flat oval stones with notches in the sides, which are known to be weights attached to fishing nets to make them sink. However, only a few of these were found, in contrast to discoveries of numerous examples of net sinkers recovered from sites around the Trenton Hamilton Marsh.



Goosefoot (*Chenopodium berlandieri*) a useful wild food source. Many seeds of this plant were found at sites within the Douglas Gut Archaeological Complex.



Three stone net sinkers found at the Riverview Bluff site. Ropes wrapped around the sides of the stones were attached to fishing nets. The stones also helped the nets spread out and sink properly in the river. The net sinker at right is approximately 3.5 inches long. [Hunter Research, Inc.]



## PREPARING AND KEEPING FOOD

The most common artifacts found on Native American occupation sites in the Delaware Valley are often unremarkable, jagged pieces of rock, sometimes reddened or blackened. Usually made of quartzite stone, this fire-cracked rock is left over from a water-heating process in which stones have been heated in fires and then dropped into water contained in animal skins suspended in pits or other receptacles. The water would have quickly boiled and been used for cooking and other purposes. This process shattered the rocks, leaving a distinctive archaeological trace.



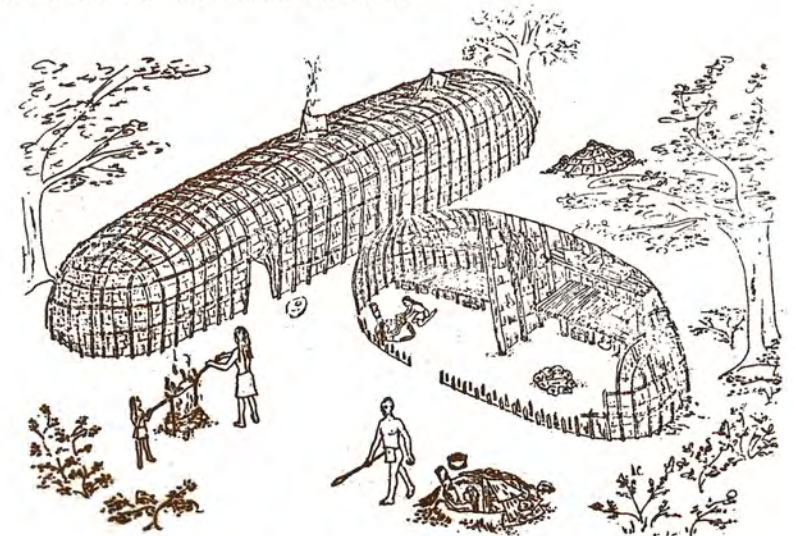
Above: one of several clusters of fire-cracked rock found at the Chain Shop site within the Douglas Gut Archaeological Complex (scales in feet and tenths of feet). Right: the results of a modern experiment where rocks have been heated in a fire and then dropped into a pot of cold water. These rocks closely resemble their archaeological counterparts. [Hunter Research, Inc.]

Pits were another common feature found during the Route 29 excavations. Because the pits are usually filled with soil darker and more organic than the undisturbed soils around them, archaeologists recognize them by this contrast. Most were used for processing and/or storing food over the winter. The autumn was a busy time when food would be dried, smoked, or rendered down so that it could be stored in the larger pits over the winter without spoiling.

After a while the pits became unusable for storage because of mold and damp. They were then filled up with trash: food waste, broken pots and stone tools, sweepings from houses, and any other unwanted material. This trash is treasure for archaeologists, because so many artifacts are found in it. At the Douglas Gut Archaeological Complex, many pits were found and it was possible to mend pieces of pottery from several different pits, showing that they were probably filled in at about the same time.

## FINDING SHELTER

It is often very difficult to find the houses that prehistoric Native Americans lived in. This is because they were wigwams framed with arches of wood saplings set a few inches into the ground and covered with bark or other materials. The holes left by these branches can sometimes be found, together with changes in the soil showing the location of the floor inside the house.



A reconstruction of the type of house or houses believed to have been found at the Chain Shop site within the Douglas Gut Archaeological Complex. [Drawing courtesy of Lenape Lifeways, Inc.]

At the edge of the excavation at the Chain Shop site, within the Douglas Gut complex, two rectangular areas of dark silty soil were found. A few tools were scattered through this level. The soil was analyzed in various ways. A radiocarbon test on charcoal from the soil gave a date of about 1,000 years ago. Although it is not possible to be certain these were houses, it seems probable that they were.

Although much of what was found in the Route 29 excavations relates to daily, practical things like the making of tools and the production of food, other discoveries remind us that these people had a rich social and spiritual life. Some artifacts, such as finely made stone gorgets or pendants, hint at personal ornamentation and display. Early historic portraits and images of Delaware Indians show items like these being worn. All of the fine personal clothing and ornamentation—moccasins and clothing of soft leather decorated with dyed porcupine quills, head dresses, face and body painting and tattoos—has decayed away. These things helped establish a person's identity and place in their society and community.



Above: a fragment of a stone gorget found in the Douglas Gut Archaeological Complex. The fragment is approximately two inches wide. [Hunter Research, Inc.]

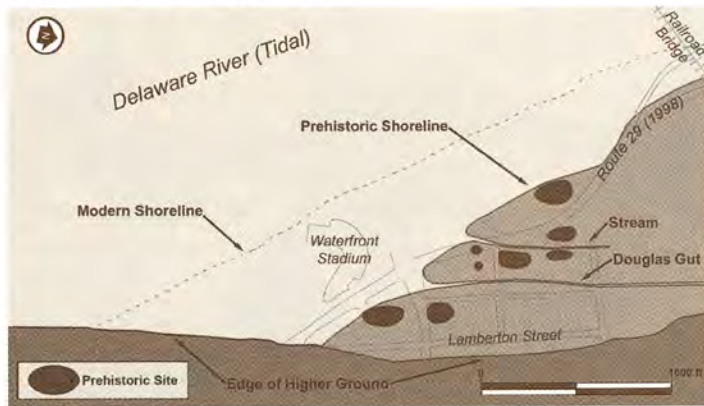
Left: an illustration showing how a small ornamental object of this type was worn. [Drawing courtesy of the New Jersey State Museum]



A reconstruction of a burial like the ones found in the Route 29 excavations. [Drawing courtesy of Lenape Lifeways, Inc.]

The ways in which a community treated its dead also give us hints about religious beliefs and social values. Several burial sites were found along the Route 29 corridor. Some remain undisturbed where they were found, but some others had to be respectfully removed because the construction could not avoid them. In one case a person had been buried between A.D. 855 and 1150 with a sheet of mica (a translucent stone). Stones around the body had been sprinkled with red ocher. The person was buried with his or her face to the southwest. A second mortuary feature consisted of a small crypt of cobbles, perhaps for a child's burial or a so-called "bundle" burial in which some of the remains of the deceased person had been brought to the site from somewhere else. All of the Native American remains that were removed were placed in the care of the New Jersey Council on Indian Affairs.

The various excavation locations studied in connection with the reconstruction of Route 29 provide only small windows into the prehistoric landscape, but we can now paint a word picture of life on the Delaware on an early autumn day 800 years ago.



The prehistoric sites of the Douglas Gut Archaeological Complex lie at the southern end of a low terrace beside small streams that once flowed into the Delaware River near where Mercer County Waterfront Park is now located. Today's shoreline lies as much as 600 feet farther into the river than it did when Native Americans lived here. [Hunter Research, Inc.]

On the flat terrace and along the small streams flowing into the river, tall grasses wave in the breeze. Close to the river's edge women are collecting seeds from a variety of plants. A man pulls a leather bag out of the earth, takes out a piece of jasper, and begins to chip it to make an arrowhead.

A little way back from the bank two or three small rectangular bark-covered houses stand by a stream. Outside, women are boiling nuts in water-filled pits, scooping up the oil that floats on the surface and ladling it into small pots. Occasionally a heated rock is added to the water from a nearby hearth. Steam rises.

A short distance away the final batch of dark gray finely decorated pots is being carefully removed from the ashes of a large fire. Some of them have broken in the firing and are thrown into an old food storage pit. Baskets full of ears of corn are being brought from farther inland and put into pits lined with sticks and grass.

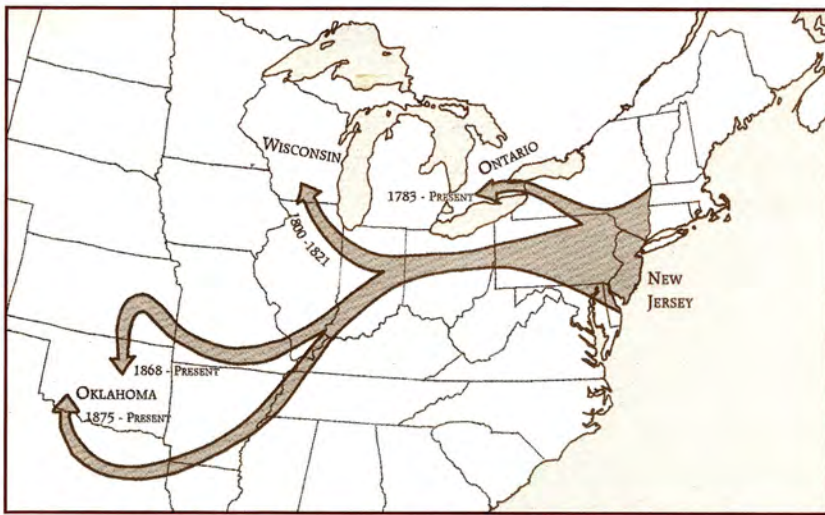
A few hundred feet to the south, on a low bluff just above the terrace, a group of shallow depressions in the ground and other signs mark the presence of a small burial place.

During the mid-1600s the Native American way of life began to change. At the Douglas Gut sites a series of small hearths produced evidence for contact with Europeans, probably Dutch traders who established a post here at the place called Sanhickan in about 1623. Trade beads, a distinctive type of tobacco pipe, and evidence for wheat flour, unknown in prehistoric times, were found together with traditional stone tools and pottery: some things changed, and some things stayed the same.

Within a few generations the small bands of native people at the falls found themselves displaced by English newcomers. For a while it was possible to simply move to a different location, and to still trade venison and corn with the settlers for new tools and ornaments. Smallpox and other new diseases killed many Indians and destroyed the families and kin groups. A long painful migration began for most of the survivors: to Canada, to the upper Midwest, and to Oklahoma.



This enlargement of part of a map prepared by Dutch Captain Cornelius Hendrickson in 1616 shows Indian houses on both sides of the Falls of the Delaware. The place is named "Stanke-kans," probably a variant of "Sanhickan," a name for this area and its inhabitants that is recorded in later documents. [E.B. O'Callaghan (editor), Documents Relative to the Colonial History of State of New-York, Volume I, Holland Documents, 1856-58]



The routes of Lenape groups migrating westward from New Jersey and surrounding areas during the late 18th and 19th centuries. [Hunter Research, Inc.]

## HOW TO FIND OUT MORE

### Places To Visit

- **New Jersey State Museum**, 205 West State Street, Trenton, New Jersey: the State Museum offers both permanent and changing exhibits on topics of Native American culture in the Delaware Valley.
- **Rankokus Indian Reservation**, Rancocas Road, Westampton Township, Burlington County, New Jersey: home to the Powhatan Renape Nation, a formally recognized American Indian Nation; the reservation offers social services to New Jersey's American Indian community, puts on arts and cultural events, and maintains a museum.
- **Lenape Village**, Waterloo Village, 525 Waterloo Road, Stanhope, Sussex County, New Jersey: a life-sized Minisink Indian village has been reconstructed based on archaeological evidence and scholarly research; programs and events offer visitors a means of experiencing Native American culture.

### Reading Suggestions

- Herbert C. Kraft, *The Lenape-Delaware Indian Heritage, 10,000 BC to AD 2000*. Lenape Books, Elizabeth, New Jersey (2001).
- R. Alan Mounier, *Looking Beneath the Surface: The Story of Archaeology in New Jersey*. Rutgers University Press, New Brunswick, New Jersey (2003).

## CREDITS

This booklet series is the product of historical and archaeological investigations undertaken for the New Jersey Department of Transportation and the Federal Highway Administration in mitigation of the effects of the reconstruction of Route 29 in the City of Trenton. The preparation of these booklets and other related research activities were conducted in compliance with Federal and State historic preservation laws and regulations. For more detailed technical reporting of the topics addressed in these booklets, readers are referred to the five-volume *Archaeological Data Recovery Excavations and Monitoring, New Jersey Route 29, City of Trenton, Mercer County, New Jersey*, available at selected local libraries, the New Jersey Historic Preservation Office, and the New Jersey Department of Transportation.

This booklet was conceived and authored by Ian Burrow of Hunter Research, Inc. Janice Wilson Stridick of Wilson Creative provided design and editorial services.

We gratefully acknowledge: David Zmoda, Nicholas Caiazza, Robert Davies, and Kathy Diringer of the New Jersey Department of Transportation (project administration); Damon Tvaryanas, Nadine Sergejeff, James Cox, Richard Hunter, Ian Burrow, Patricia Madrigal, William Liebeknecht, Charles Ashton, and Rebecca White (research assistance) and Michael Murphy, James Lee, Frank Dunsmore, Douglas Scott, and Dawn Turner (graphics assistance) of Hunter Research, Inc.; Lisa Smith (graphic design) of Wilson Creative; Michael Stewart, Temple University; and John Kraft, Lenape Lifeways, Inc.

## OTHER TITLES IN THE HISTORY TRACED BY ROUTE 29 BOOKLET SERIES

- **A Tale of Two Houses: The Lambert/Douglas House and the Rosey Hill Mansion, 1700–1850**
- **Fish and Ships: Lambertton, the Port of Trenton**
- **Power to the City: The Trenton Water Power**
- **Rolling Rails by the River: Iron and Steel Fabrication in South Trenton**
- **Quakers, Warriors, and Capitalists: Riverview Cemetery and Trenton's Dead**



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